

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-6 (Canceled)

7. (Currently amended) The monoclonal antibody of claim + 33, wherein the antibody is in a form of scFv.

8. (Currently amended) The monoclonal antibody of claim + 33, wherein the antibody is in a form of Fab.

9. (Currently amended) The monoclonal antibody of claim + 33, wherein the antibody is in a form of fully assembled antibody.

Claims 10-12 (Canceled)

13. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has V_L comprising the amino acid sequence of
X₁X₂X₃X₄TQX₅PSX₆X₇SX₈X₉X₁₀GX₁₁X₁₂X₁₃X₁₄IX₁₅CX₁₆X₁₇SX₁₈X₁₉IX₂₀X₂₁X₂₂X₂₃X₂₄WYQQX₂₅PGX₂₆APX₂₇X₂₈LX₂₉YX₃₀X₃₁X₃₂X₃₃LX₃₄X₃₅GVX₃₆X₃₇RFSGX₃₈X₃₉SGTDFX₄₀LTIX₄₁X₄₂LQX₄₃X₄₄DX₄₅AX₄₆YYCQQX₄₇X₄₈X₄₉X₅₀PX₅₁TFGX₅₂GTKX₅₃X₅₄IK, wherein the underlined regions are designated as V_L/CDR1, V_L/CDR2, and V_L/CDR3, respectively, whereas the rest of the region is designated as framework, and wherein X₁ is D, E or A; X₂ is I, or T; X₃ is V, E, K, R, Q, or T; X₄ is M, or L; X₅ is S, or T; X₆ is S, or T; X₇ is L, or V; X₈ is A, or V; X₉ is S, or T; X₁₀ is P, V, L, A, or I; X₁₁ is E, or D; X₁₂ is R, or T; X₁₃ is A, or V; X₁₄ is T, or A; X₁₅ is T, S, or A; X₁₆ is S, R, N, K, H, or Q; X₁₇ is A, or S; X₁₈ is Q, or R; X₁₉ is S, D, A, or P; X₂₀ is S, G, R, T, or Y; X₂₁ is T, N, S, D, or K; X₂₂ is Y, or D; X₂₃ is L, or I; X₂₄ is A, N, or T; X₂₅ is K, or I; X₂₆ is Q, K, T, or I; X₂₇ is R, K, Q, N, H, S, or E; X₂₈ is V, or L; X₂₉ is I, or V; X₃₀ is F, A, G, D, or S; X₃₁ is A, or T; X₃₂ is S, or T; X₃₃ is N, S, R, or T; X₃₄ is A, H, or Q; X₃₅ is S, or G; X₃₆ is P, T; X₃₇ is S, N, D, G, or Y; X₃₈ is S, or T; X₃₉ is G, or R; X₄₀ is T, or A; X₄₁ is S, or R; X₄₂ is S, or R; X₄₃ is P, or A;

X₄₄ is E , or D; X₄₅ is F, V, or S; X₄₆ is V, T, I , A , or S; X₄₇ is Y, or S; X₄₈ is S, Y, or N; X₄₉ is S , or T; X₅₀ is T, V, A, P, K, G, S, or I; X₅₁ is W , or Y; X₅₂ is Q , or G; X₅₃ is V, or L; and X₅₄ is E, D , or A.

14. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has V_L comprising the amino acid sequence of

X₁X₂X₃LTQPPSX₄SX₅TPGQX₆VTISCSGX₇X₈SNX₉GX₁₀NX₁₁VX₁₂WYQQX₁₃PGX₁₄APKX₁₅LX₁₆YX₁₇NX₁₈X₁₉RPSGVPX₂₀RX₂₁SGSX₂₂SX₂₃TSASLAISGLX₂₄SEDEADYYCX₂₅X₂₆WDDSLX₂₇GYVFGX₂₈GTX₂₉LTVL, wherein the underlined regions are designated as V_L/CDR1, V_L/CDR2, and V_L/CDR3, respectively, whereas the rest of the region is designated as framework, and wherein X₁ is Q L, or N; X₂ is P A F, or S; X₃ is V, or M; X₄ is A, or T; X₅ is G, or A; X₆ is R, or S; X₇ is S, or T; X₈ is S, T Y, or N; X₉ is I , or V; X₁₀ is S, or R; X₁₁ is S, P, N, A, or T; X₁₂ is N, T , or Y; X₁₃ is L, or F; X₁₄ is T, or A; X₁₅ is V, L, or F; X₁₆ is M, or I; X₁₇ is G, T, or S; X₁₈ is N, or D; X₁₉ is Q, or E; X₂₀ is D, or E; X₂₁ is F, or L; X₂₂ is K, or R; X₂₃ is G, or A; X₂₄ is Q, L, or R; X₂₅ is A, or G; X₂₆ is A, S, or T; X₂₇ is N, S, or T; X₂₈ is T, or A; and X₂₉ is K, or Q.

15. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has V_L comprising the amino acid sequence of

QSALTQPPSVSGAPGQRVTISCTGRSSNIGAGHDVHWYQQLPGTAPKLLIYANDQRPSGVPDRFSDSKSGTSASLGISGLRSEDEADYFCATWDDSLHGYVFGTGTKVTVL (SEQ ID No: 54).

16. (Withdrawn) A monoclonal antibody is provided that specifically binds to a human VEGF and has V_H comprising the amino acid sequence of

X₁X₂QLVX₃SGGGX₄VQPGGX₅LRLX₆CAX₇SGX₈X₉X₁₀X₁₁X₁₂X₁₃GX₁₄NWX₁₅RQAPGKGX₁₆EWVGWX₁₇NTX₁₈X₁₉GX₂₀X₂₁TYX₂₂X₂₃X₂₄FX₂₅RRX₂₆TX₂₇SX₂₈X₂₉X₃₀SKX₃₁X₃₂X₃₃YLQX₃₄NSLRAEDTAVYYCAX₃₅YPX₃₆YYGX₃₇SHWYFDVWX₃₈QGTLVTVSS, wherein the underlined regions are designated as CDR1, CDR2, and CDR3, respectively, whereas the rest of the region is designated as framework according to Kabat nomenclature, and wherein X₁ is E, or Q; X₂ is V, or G; X₃ is Q, or E; X₄ is V, or L; X₅ is S, or T; X₆ is S T, or R; X₇ is A, or V; X₈ is Y, or F; X₉ is T, D, N, S, or A; X₁₀ is F, or L; X₁₁ is T, D, Y, A, S, or N; X₁₂ is N, H, or S; X₁₃ is Y, or F; X₁₄ is M, L, I,

or V; X₁₅ is I, V, or L; X₁₆ is L, or P; X₁₇ is I, or V; X₁₈ is Y, or N; X₁₉ is T, or N; X₂₀ is E, or A; X₂₁ is P, T, or S; X₂₂ is A, or V; X₂₃ is A, H, Q, P, D, or E; X₂₄ is D, or E; X₂₅ is K, or T; X₂₆ is V, F, or L; X₂₇ is F, or I; X₂₈ is L, or R; X₂₉ is D, or N; X₃₀ is T, or N; X₃₁ is S, or N; X₃₂ is T, Q, P, or K; X₃₃ is A, V, or P; X₃₄ is L, or M; X₃₅ is K, or R; X₃₆ is H, or Y; X₃₇ is S, R, or T; and X₃₈ is G, or A.

17. (Withdrawn) A monoclonal antibody is provided that specifically binds to a human VEGF and has V_L comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:2-54, more preferably comprising the amino acid sequence selected from the group consisting of SEQ ID NO:14, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:44, SEQ ID NO:47, and SEQ ID NO:54.

18. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has V_H comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:57-110 and SEQ ID NOs:285-310, and preferably comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:61-64, SEQ ID NO:67, 68, 70, 75, 83, 88, 89, 90, 91, 92, 93, 94, and 96-110.

19. (Withdrawn) A monoclonal antibody is provided that specifically binds to a human VEGF and has CDR2 in the V_L region (V_L/CDR2) comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:195-209.

20. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR3 in the V_L region (V_L/CDR3) comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:210-228.

21. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has a framework region (FR) CDR3 in the V_L region (V_L/FR) comprising the amino acid sequence selected from the group consisting of: SEQ ID NO:229-269, and preferably comprising the amino

acid sequence selected from the group consisting of SEQ ID NO:232, 235, 237, 251, 255, 263, and 265.

22. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR1 in the V_H region (V_H /CDR1) comprising the amino acid sequence of $GX_1X_2X_3X_4X_5X_6GX_7N$, wherein X_1 is Y, or F; X_2 is D, N, T, S, or A; X_3 is F, or L; X_4 is T, D, S, Y, A, or N; X_5 is H, N, or S; X_6 is Y, or F; X_7 is M, L, I, or V.

23. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR2 in the V_H region (V_H /CDR2) comprising the amino acid sequence of $WX_1NTX_2X_3GEX_4TYX_5X_6X_7FX_8R$, wherein X_1 is I, or V; X_2 is Y, or N; X_3 is T, or N; X_4 is P, T, or S; X_5 is A, or V; X_6 is A, Q, P, H, D, or E; X_7 is D, or E; and X_8 is K, or T.

24. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR2 in the V_H region (V_H /CDR2) comprising the amino acid sequence selected from the group consisting of: SEQ ID NOs:136-156.

25. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR3 in the V_H region (V_H /CDR3) comprising the amino acid sequence of $KYPX_1YYGX_2SHWYFDV$, wherein X_1 is Y, or H, and X_2 is R.

26. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has CDR3 in the V_H region (V_H /CDR3) comprising the amino acid sequence selected from the group consisting of SEQ ID NOs:311-337.

27. (Withdrawn) A monoclonal antibody that specifically binds to a human VEGF and has FR in the V_H region (V_H /FR) comprising the amino acid sequence of $X_1VQLVX_2SGGGX_3VQPGGX_4LRLX_5CAX_6S/CDR1/WX_7RQAPGKGLEWVG/CDR2/RX_8TX_9S$
 $X_{10}DX_{11}SKX_{12}X_{13}X_{14}YLQX_{15}NSLRAEDTAVYYCA/CDR3/WX_{16}QGTLVTVSS$, wherein X_1 is E, or Q; X_2 is Q, or E; X_3 is V, or L; X_4 is S, or T; X_5 is S, T, or R; X_6 is A, or V; X_7 is I, or V; X_8

is F, or V; X₉ is F, or I; X₁₀ is L, or R; X₁₁ is T, or N; X₁₂ is S, or N; X₁₃ is T, Q, or K; X₁₄ is A, or V; X₁₅ is M, or L; and X₁₆ is G, or A.

28. (Previously Presented) A monoclonal antibody that specifically binds to a human VEGF and has a V_L and V_H pair selected from the group consisting of: SEQ ID NO:28 and 88; SEQ ID NO:28 and 90; SEQ ID NO:28 and 91; SEQ ID NO:28 and 106; SEQ ID NO:28 and 107; SEQ ID NO:28 and 108; and SEQ ID NO:28 and 109.

29. (Withdrawn) The monoclonal antibody of any of claims 14-29, wherein the antibody has dissociation constant K_d equal to or lower than 10 nM.

30. (Withdrawn) The monoclonal antibody of any of claims 14-29, wherein the antibody has dissociation constant K_d equal to or lower than 1 nM.

31. (Withdrawn) The monoclonal antibody of any of claims 14-29, wherein the antibody has dissociation constant K_d equal to or lower than 0.1 nM.

32. (Withdrawn) The monoclonal antibody of any of claims 14-29, wherein the antibody has dissociation constant K_d equal to or lower than 0.01 nM.

33. (Previously presented) A monoclonal antibody that specifically binds to human VEGF and has a V_L and V_H pair selected from the group consisting of: SEQ ID NO:26 and 88; SEQ ID NO:26 and 90; SEQ ID NO:26 and 91; SEQ ID NO:26 and 106; SEQ ID NO:26 and 107; SEQ ID NO:26 and 108; SEQ ID NO:26 and 109; SEQ ID NO:28 and 88; SEQ ID NO:28 and 90; SEQ ID NO:28 and 91; SEQ ID NO:28 and 106; SEQ ID NO:28 and 107; SEQ ID NO:28 and 108; SEQ ID NO:28 and 109; SEQ ID NO:36 and 88; SEQ ID NO:36 and 90; SEQ ID NO:36 and 91; SEQ ID NO:36 and 106; SEQ ID NO:36 and 107; SEQ ID NO:36 and 108; and SEQ ID NO:36 and 109.

34. (Previously presented) A monoclonal antibody that specifically binds to human VEGF and has a VL and VH pair selected from the group consisting of: SEQ ID NO:26 and 106; SEQ ID NO:28 and 106; and SEQ ID NO:36 and 106.

35. (Previously presented) A monoclonal antibody that specifically binds to human VEGF and has a V_L and V_H pair consisting of SEQ ID NO:28 and 106.

36. (New) A monoclonal antibody that specifically binds to human VEGF and has a VL domain consisting of SEQ ID NO:28 in combination with a VL domain selected from SEQ ID NO: 106, SEQ ID NO: 107 and SEQ ID NO:108 SEQ ID NO: 109, SEQ ID NO: 88, SEQ ID NO: 90, and SEQ ID NO: 91 .

37. (New) The monoclonal antibody of claim 35, wherein the antibody is in a form of scFv.

38. (New) The monoclonal antibody of claim 35, wherein the antibody is in a form of Fab.

39. (New) The monoclonal antibody of claim 35, wherein the antibody is in a form of fully assembled antibody.

40. (New) A monoclonal antibody that specifically binds to a human VEGF and has a light chain variable domain comprising CDR1, CDR2 and CDR3 regions consisting of the amino acid sequences set forth in SEQ ID NO: 172, SEQ ID NO: 195 and SEQ ID NO: 212, respectively.

41. (New) The monoclonal antibody according to claim 40, wherein the heavy chain variable domain comprises CDR1, CDR2, and CDR3 regions consisting of the amino acid sequences set forth in SEQ ID NO: 31, SEQ ID NO: 152 and SEQ ID NO: 327, respectively.

42. (New) The monoclonal antibody of claim 41, wherein the antibody is in a form of scFv.

43. (New) The monoclonal antibody of claim 41, wherein the antibody is in a form of Fab.

44. (New) The monoclonal antibody of claim 41, wherein the antibody is in a form of fully assembled antibody.

45. (New) A monoclonal antibody that specifically binds to a human VEGF and has V_L comprising CDR1, CDR2 and CDR3 regions consisting of the amino acid sequences set forth in SEQ ID NO: 170, SEQ ID NO: 195 and SEQ ID NO: 214, respectively.

46. (New) A monoclonal antibody that specifically binds to a human VEGF and has a heavy chain variable domain which comprises CDR1, CDR2, and CDR3 regions consisting of the amino acid sequences set forth in SEQ ID NO: 31, SEQ ID NO: 152 and SEQ ID NO: 327, respectively.

47. (New) A monoclonal antibody that specifically binds to a human VEGF and has V_L comprising CDR1, CDR2 and CDR3 regions consisting of the amino acid sequences set forth in SEQ ID NO: 182, SEQ ID NO: 201 and SEQ ID NO: 222, respectively.

48. (New) An antibody heavy chain variable domain (VH) consisting of an amino acid sequence selected from SEQ ID NO: 88, SEQ ID NO: 90, SEQ ID NO: 91, SEQ ID NO: 106, SEQ ID NO: 107, SEQ ID NO: 108 and SEQ ID NO: 109.

49. (New) An antibody light chain variable domain (VL) consisting of an amino acid sequence selected from SEQ ID NO: 26, SEQ ID NO: 28, and SEQ ID NO: 36.